

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000055020	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/012117	International filing date (<i>day/month/year</i>) 27.10.2004	Priority date (<i>day/month/year</i>) 29.10.2003
International Patent Classification (IPC) or national classification and IPC C07C37/11		
Applicant BASF Aktiengesellschaft		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.	
2.	This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.	
3.	This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4.	This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I

Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-18 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 1-21 as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on 12.10.2005 with letter of 11.10.2005
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1, 2 as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	<u>1-21</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-21</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-21</u>	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
1. This report makes reference to the following documents:			
D1: US 6 077 979 A (E. I. DU PONT NEMOURS AND COMPANY) 20 June 2000 (2000-06-20), cited in the application			
D2: WO 99 46227 A (SUMITOMO CHEM CO LTD.) 16 September 1999 (1999-09-16)			
D3: JP 2003 171325 A (SUMITOMO CHEM CO LTD.) 20 June 2003 (2003-06-20)			
2. D1 (which is cited in the description) is considered to be the prior art closest to the subject matter of claims 1 and 2. D1 discloses a method of producing 2,2'-dihydroxybiphenyl compounds by reacting phenols that have an ortho hydrogen atom with a peroxide in the presence of water at a temperature of 0 to 100°C.			
3. Thus the subjects of claims 1 and 2 differ from D1 in that the method is carried out in the presence of a polymer that is insoluble in water (as defined in claims 1 and 2).			

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>This feature is not mentioned in the prior art. Claims 1 and 2 therefore meet the requirements of PCT Article 33(2).</p> <p>4. A problem with the method according to D1 is that, during the reaction, a rubbery, sticky mass is formed which leads to coating of the reactor. Coating of the reactor leads to problems in heat exchange during the reaction and in reprocessing of the reaction mixture.</p> <p>5. The problem to be solved by the present invention can therefore be regarded as that of preventing this layer formation. This problem is solved by the characterizing feature of claims 1 and 2. The prior art does not contain anything that would have prompted a person skilled in the art to carry out the method as described in claims 1 and 2. The examples, in particular, the comparative example according to D1, show that the aforementioned problem is solved by the characterizing feature. Claims 1 and 2 therefore meet the requirements of PCT Article 33(3).</p> <p>6. Claims 3 to 21 are dependent on claims 1 and 2 and relate to preferred method features. The claims therefore meet the PCT requirements for novelty and inventive step.</p>